1855MNRAS..16...28K

Epoch 1855, February 14^d 7^h 0^m

faint and confused.

Epoch 1855, February 17^d 7^h 0^m

olerably bright, yet confused, owing to a strong auroral glare.

Epoch 1855, March 7^d 7^h 50^m

very brilliant, tolerably steady in its light; N. edge sharp and well defined, passing immediately over γ *Arietis*, and covering η *Piscium*. S. edge confused. The apex extended to ζ *Arietis*.

Epoch 1855, March 18^d 7^h 30^m

bright but confused.

Description of an Out-of-doors Equatoreal Stand for Telescopes.
By the Rev. Samuel King, M.A.

"The accompanying photograph will give a general idea of the construction of this instrument, which is a modification of the parallactic ladder described in Admiral Smyth's invaluable *Cycle*. The chief novelty is the introduction of circles of right ascension and declination divided on slate.

"Upon a pier of brick-work, built in cement upon a substantial foundation, is placed a stone cube, having its northern edge chamfered off at an angle equal to the co-latitude. On this sloping face is securely fixed the brass socket or collar (with antagonist screws for adjustment) which carries the south pivot of the polar axis. The collar for the north pivot is sunk in a square block of mahogany, having strong brass cylindrical trunnions horizontally situated on opposite sides, the axes of which are in a line with the collar. These trunnions work in sockets formed for them in the top of each leg of the supporting shears;—the collar is thus brought to bear true upon the shoulder of the pivot in any position of the legs while roughly adjusting for altitude.

"The polar axis is a strong, double mortised, oblong frame, within which, and acted upon by a small double tackle, slides another frame, like a sash-window, carrying the cradle or trough, with Y's at either end, in which the telescope is securely fixed, so that the lines of the polar and declination axes intersect in its centre of gravity, and it balances accurately in every position.

"On the foot of the polar axis is fixed the slate hour-circle, 15 inches in diameter, divided on the limb with considerable accuracy (by means of a lathe with division-plate and index) to four minutes of time, allowing a very fair estimate to half a minute (without a vernier, which I intend some time adding). The declination circle, also of slate, is 12 inches diameter, divided to 30′.

"This apparatus has been exposed to all the vicissitudes of the weather for more than a year and a half, without requiring any

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1855MNRAS..16...29B

material alteration in the adjustments. It carries an excellent telescope of 5 feet focal length and 4¼ inches aperture, by Mills of Pentonville; and with a power of 72 I can find, without fail, anything I look for by day or night. By means of a pulley-wheel beneath the hour-circle, connected by a catgut band with a smaller pulley acted upon by a tangent screw, I get an excellent slow motion in R.A., to which I hope shortly to attach a jack to act as a clock.

"The wood-work is of clean-grained Honduras mahogany. The cost of the whole to me was about 4*l.* The brass work and division of the circles, which I executed myself, I set down at 2*l.* additional. This is altogether a very small cost for the facilities which the apparatus affords to the astronomer whose means are limited; and there are few places now in which a suitable lathe, and a sufficiently skilful workman, cannot be found for the execution of all that is needed.

"I have been as concise as possible in the description of this affair; but it will give me much pleasure to furnish more particular details to any gentleman who may be desirous of them. It may be added that the framing of the shears being secured by brass thumb-screws, the whole machine may be taken to pieces and removed in five minutes, with the exception of the pier, which, with a little contrivance, might be made to answer the additional purpose of supporting a sun-dial.

"*St. Aubin's, Jersey, December* 18, 1855."

Occultations of Stars by the Moon observed at Highbury.

By T. W. Burr, Esq.

Latitude 51° 33′ 45″·1 N. Longitude 23″·8 W.

1855.			Sidereal Time h	m	s	
March 5th γ *Virginis*	Preceding Star	Immersion	9	13	46·4	Bright Limb
,,	Following Star	,,	9	14	6·4	
,,	,,	Emersion	9	29	47·4	Dark Limb
April 23d λ *Cancri*		Immersion	12	57	59·8	Dark Limb
Oct. 24th ο *Piscium*		,,	23	56	54·6	Dark Limb. Moon very nearly full

"The two latter occultations are good observations as to time. In the case of γ *Virginis* the clock-error was not so accurately known; but the observations are recorded for the sake of drawing attention to the length of time during which the second star remained attached to the edge of the moon's disc. The preceding star disappeared instantaneously; but the following one, which arrived at the moon's edge in 4^{s} or 5^{s}, remained attached to it until 20^{s} had elapsed from the immersion of the first star, when the

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